

Summary

The Artists, Christo and Jeanne-Claude, propose to install a temporary work of art consisting of fabric panels suspended horizontally over approximately 5.9 miles of a 42.4-mile stretch of the Arkansas River between Cañon City and Salida, Colorado. The work of art, known as *Over The River™* (OTR), would require the use of federal, private, and state lands adjacent to the river. The BLM Royal Gorge Field Office (RGFO) administers the federal lands within the proposed Project Area.

Over The River Corporation (OTR Corp or applicant) has applied for a land use authorization with the BLM RGFO for a three-year period to install, exhibit, and remove the work of art on public lands in western Fremont County and the southeast portion of Chaffee County, Colorado. The BLM RGFO is the lead federal agency and has the final authority of determining whether, and under what terms and conditions, a BLM land use permit would be issued to the project applicant for *Over The River™*.

The BLM RGFO has determined that an Environmental Impact Statement (EIS) is required under the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [U.S.C.] 4321 et seq.; Public Law [PL] 91-190) to analyze the Artists' proposal, define a range of reasonable alternatives, and disclose the project's potential environmental impacts. A Notice of Realty Action (NORA) was published in the *Federal Register* on October 31, 2008 (pages 64982-64983), beginning the process of developing BLM land use permitting alternatives to accommodate whether, where, when, and under what conditions public lands would be made available to the applicant.

NEED FOR ACTION

The BLM needs to determine if the work of art can be accommodated on public land while maintaining resource objectives as described in the 1996 RGFO Resource Management Plan, including the provisions of the Arkansas Canyonlands Area of Critical Environmental Concern (ACEC), and to make an informed decision on whether or not to issue the land use authorization.

The applicant has submitted a written proposal for a land use authorization to construct and display a work of art titled *Over The River™*. The BLM is responding to OTR Corp's application in accordance with NEPA, analyzing and disclosing the environmental impacts of issuing the requested land use authorization. Through this NEPA process, the BLM will make a decision on whether or not to approve the application and determine under what conditions the project should proceed, if approved.

PURPOSE

The BLM's purpose is to ensure that the provisions and objectives established for the management of resources within the RGFO, including the ACEC, are maintained; to ensure that the public uses described herein will not cause unacceptable damage to public lands or ACEC values; and to assure that public health and safety concerns are addressed.

Additionally, the BLM's purpose for pursuing this action includes advancing the objective of providing a broad range of recreational opportunities on the lands under their administration. Specifically, the Approved RMP states that various actions will occur to enhance recreation, emphasizing a balance between resource protection and tourism (BLM 1996).

REVIEW OF THE APPROVED LAND USE PLAN

All actions approved or authorized by the BLM must conform to the existing land use plan where one exists (43 CFR 1610.5-3, 43 CFR 2920.2-5). In this case, the 1996 RMP is silent on specific guidelines or management objectives pertinent to the proposed project. As such, the 1996 Approved RMP / Record of Decision (ROD) were reviewed to identify overarching or programmatic guidance, objectives, and/or decisions as they pertain to the applicants' proposal.

In general, with the inclusion of appropriate constraints, stipulations, and mitigation measures, the applicants' proposal appears to be broadly consistent with the overall RMP objective of providing "variety of levels, methods, and mix of multiple use resource management [and] utilization," and support to the local and regional economy.

ISSUES IDENTIFIED FOR FURTHER ANALYSIS

The following issues have been identified for further analysis in this EIS. The issues presented in Table S-1 are not intended as a comprehensive list of all issues to be evaluated in the EIS; these issues simply represent the key concerns of the public, project team staff, and cooperators.

Table S-1. Summary of Issues Identified for Further Analysis

Resource	Installation and Removal Phases	Exhibition Window
Emergency Response	<ul style="list-style-type: none"> • Response to industrial accidents • Response to hazardous material spills • Response to recreational accidents (rafting, ATV use, hiking, fishing, and climbing) • Search and rescue incidents • Motor vehicle and aircraft accidents • Wildfire and stormwater events • Crime incidents • Accessibility for canyon resident health issues • Response times • Adequacy of resources to respond to incidents and existing capabilities of response teams • Accessibility to canyon and evacuation • Emergency coordination and communication issues • Weather and air travel constraints 	<ul style="list-style-type: none"> • Response to recreational accidents (rafting, ATV use, hiking, fishing, and climbing) • Search and rescue incidents • Motor vehicle and aircraft accidents • Wildfire and stormwater events • Crime incidents • Accessibility for canyon resident health issues • Response times • Accessibility to canyon and evacuation • Adequacy of resources to respond to incidents and existing capabilities of response teams • Emergency coordination and communication issues • Weather and air travel constraints

Resource	Installation and Removal Phases	Exhibition Window
Engineering	<ul style="list-style-type: none"> Glues and bonding chemicals used during installation Anchor hole patching during removal 	<ul style="list-style-type: none"> Artwork's durability for wind and hail Geological hazard (fault impacts) Adequacy of engineering assumptions
Natural and Cultural Resources (including soils, geology, noxious weeds, and wildland fire)	<ul style="list-style-type: none"> Potential for erosion and river sedimentation Potential for noxious weed infestation Potential for rock instability Assurance of adequate restoration Stress on natural resources beyond typical current conditions in canyon Potential damage to cultural resources 	<ul style="list-style-type: none"> Shading effects on river ecology Geological hazard from cable vibrations Potential for erosion and river sedimentation Potential for noxious weed infestation Fire danger Stress on natural resources beyond typical current conditions in canyon Potential damage to cultural resources
Pollution and Sanitation	<ul style="list-style-type: none"> Potential for river contamination and water quality Site aesthetics Noise and dust resulting from drilling Potential for river contamination and water quality Hazardous materials spills Capacity of area for sanitation, toilet facilities, and trash removal/recycling 	<ul style="list-style-type: none"> Debris if artwork collapsed Potential for river contamination and water quality Hazardous materials spills Capacity of area for sanitation, toilet facilities, and trash removal/recycling
Public Safety	<ul style="list-style-type: none"> Insurance and liability issues Accident potential during construction/removal Public safety risks and dangers in relation to activity 	<ul style="list-style-type: none"> Harm if artwork collapsed Insurance and liability issues General public safety Potential for threat of terrorism Considerations of public safety from operation planning
Recreation	<ul style="list-style-type: none"> Economic impacts to recreation industries (fishing, rafting/kayaking) Duration of installation and removal impacts on river and river access for recreation Effects on natural canyon/river experience and natural beauty Impacts on nearby area's bicycle and hiking trails and off-road use 	<ul style="list-style-type: none"> Cable and fabric panel impacts on recreation, including fishing activities and rafting Effects on natural canyon/river experience and natural beauty River safety and conflicts with fabric panels Exceeding visitor carrying capacity during the busy summer season Impacts on area's nearby bicycle and hiking trails and off-road use Recreational experience of viewing artwork Attraction of new types of visitors to area Railroad access and use potential

Resource	Installation and Removal Phases	Exhibition Window
Socioeconomics	<ul style="list-style-type: none"> Costs to area, including disruption of life, work, and recreation in canyon Commercial traffic impacts Potential for increased crime Boost for local economy (visitor expenditures) 	<ul style="list-style-type: none"> Exceeding visitor carrying capacity during the busy summer season Commercial traffic impacts Potential for increased crime Effect on local economy (visitor expenditures) Long-term social effect from work-of-art Costs paid by Artists Costs to area, including disruption of life, work, and recreation in canyon
Transportation	<ul style="list-style-type: none"> Narrow US 50 cross section Delays - increased travel times Duration and lane closures Local traffic congestion and access 	<ul style="list-style-type: none"> Delays - increased travel times Local traffic congestion and access Temporary air pollution Potential for increased crashes Narrow US 50 cross section and narrow canyon constraints Lack of alternate routes Traffic Management Plan Drivers' unfamiliarity with environment Alternate display locations and times Decreased speed to possibly reduce accidents
Wildlife	<ul style="list-style-type: none"> Noise and vibration impacts Physical disturbance Wildlife accustomed to human presence, cars, boats, and previously to trains Habitat and water access limitations Increased vehicular traffic 	<ul style="list-style-type: none"> Potential cable and fabric hazards to wildlife Increased vehicular traffic Stress induced by visitor population Shading effects of fabric panels on wildlife and river ecology Habitat and water access limitations Harm if artwork collapsed

ALTERNATIVES DEVELOPMENT

Four project components, each of which could be altered in various ways to respond to known issues and concerns, formed the basis of the alternatives development process.

1. **Panel Placement**, which refers to the physical extent and specific locations where the fabric panels would be located.
2. **Transportation**, which refers to traffic management strategies and/or the inclusion of transit options to facilitate the movement of visitors through the exhibit.
3. **Visitor Management**, which addresses how visitors would be managed and the infrastructure needed to accommodate those visitors.
4. **Temporal Considerations**, which includes the timing, duration, and season of the project phases.

For each of these four project components, a comprehensive list of reasonable elements (options and variations within a project component) was developed in coordination with the BLM Interdisciplinary Team, Cooperating Agencies, and EIS Contractor Staff.

Individual alternatives were assembled by combining one element of each project component into an alternative package. *Panel Placement* elements (e.g., 5.9 miles of panels, 4.8 miles of panels, etc.) served as the foundation for each alternative. Five basic panel configurations resulted from this methodology, including a no action scenario (0.0 miles). The resulting range of reasonable alternatives is described in Chapter 2 and summarized in Table S-2. (A more detailed description of the alternative development process is provided in Appendix B.)

ALTERNATIVES CONSIDERED IN THE EIS

Six separate action alternatives and the No Action Alternative are described and analyzed in the remainder of this EIS.

Table S-2. Summary of EIS Alternatives

			No Action	Alternative 1				Alt.	Alt.
				1a	1c	1d	2	3	4
PANELS		5.9 miles at 8 sites		x	x	x			
		4.8 miles at 5 sites					x		
		4.1 miles at 8 sites						x	
		1.4 miles at 4 sites							x
TRANS		No Accel/Decel Lanes at Harvey Bridge		x					x
		Temporary Accel/Decel Lanes at Harvey Bridge			x	x	x	x	
VISITOR MANAGEMENT	Rationing	Existing boat rations		x		x	x	x	x
		New, temporary rations*			x				
	AHRA Sites	AHRA sites open, existing uses permitted; standard SP entrance fees apply		x			x	x	x
		AHRA sites open, OTR-related rec. uses only; event-only fees applied			x				
		Close AHRA rec. sites; lump sum payment to offset revenue loss				x			
	Staging/Info	Parkdale		x	x	x	x	x	
		Texas Creek		x	x	x	x	x	x
		Vallie Bridge		x	x	x	x	x	x
		Fremont Road		x	x	x	x	x	x
		Salida		x	x	x	x	x	x

			No Action	Alternative 1				Alt.	Alt.
				1a	1c	1d	2	3	4
TEMPORAL	Const. Duration	Two years		x	x		x	x	
		One year				x			x
	Viewing Window	Two weeks		x		x	x	x	x
		Three weeks			x				
	Viewing Season	June/July					x		
		August		x	x			x	x
		September				x			

*New rations would apply during the last two weeks of blossoming, exhibition, and the first week of demobilization (5 weeks total).

1. Applicant's Proposed Project (Alternative 1a)

As proposed by the applicant, *Over The River™* would consist of approximately 5.9 miles of fabric panels suspended above the Arkansas River in eight areas within a 42-mile stretch of river between Salida and Cañon City. The fabric panels would be supported above the river by a system of cables and anchors. The exhibit is proposed for a 2-week display and viewing period. The proposed art exhibit is a no-fee visitor event and includes no viewing charge. At the end of the 2-week exhibition period, the system of cables and anchors and other above-ground materials would be removed and recycled. The applicant would be responsible for restoring the river corridor to BLM standards per the terms and conditions defined in a land use authorization.

The installation, exhibition, and removal phases are projected to attract 416,000 visitors over an approximately three-year period, including 344,000 visitors during the 2-week exhibition proposed for the first half of August.

a. Installation

Each panel display would consist of a series of ground anchors, anchor transition frames (ATF), steel cables and carabiners, and fabric panels. The installation phase would be accomplished in five progressive stages: (1) survey anchor points, (2) install anchors, (3) install ATFs, (4) install cables, and (5) install fabric panels.

Installation would be scheduled to occur over a 28-month period (approximately); this timeframe includes several seasonal avoidance periods and/or nighttime construction periods to avoid resource-specific concerns. No visitor amenities would be offered during installation.

Table S-3. Alternative 1a Installation Timeframes (based on a June 2011 Record of Decision [ROD])

Installation Stage	Duration	Est. Beginning Date
Anchor surveys	15 months	June 2011
Anchor drilling	14 months	June 2011
ATF installation	8 months	November 2012
Cable/carabiner installation	2 months	June 2013
Blossom of fabric panels	7 days	July 2013

The total level of effort for installation is estimated to be 3,000 crew work days. At a minimum, four, four-man crews would be working in the corridor during the installation phase. However, project support and management staff would also be present at the panel work sites and throughout the project area, in general. It is estimated that 20 to 30 people would be working in the project corridor for the duration of the installation phase.

It is estimated that US 50 lane closures would occur on 380 days over the 28-month installation period when crews are working on the highway side of the river. This timeframe includes seasonal avoidance periods and/or nighttime construction periods to avoid resource-specific concerns.

b. Exhibition

The exhibition period would begin when installation of the art is complete; no construction or installation activities would occur during this phase of the project.

The Artists would not require or collect admission fees for viewing. The Artists intend for visitors to view the art by raft, kayak, or other watercraft from the river, or by automobile from the highway. Pedestrian access to the exhibit would be limited to the Parkdale Viewing Center. Bicyclists would only be permitted in the corridor Monday through Thursday.

c. Removal / Restoration

Removal of the physical features of the work of art would commence immediately after the exhibition period and would be completed within approximately three months, weather permitting. No visitor amenities would be offered during the removal period.

Removal of the exhibit would consist of breaking down the temporary visitor information and viewing area facilities, and removing all above-ground hardware and fabric elements of the exhibit.

d. Visitation Projections and Arrival Patterns

An independent visitation projection was produced for the purposes of conducting the impact comparisons presented in this document. (A detailed report of visitation projections is provided in Appendix C.) This analysis is inclusive of general tourism or other area attraction visitors, but does not include local, residential, or commercial traffic viewers. Visitation is estimated at 344,000 visitors for Alternative 1a during the 2-week exhibition period.

It is anticipated that approximately 80% of visitors would arrive from the east, travelling westbound through the corridor; the remaining 20% would travel eastbound through the corridor. The majority of visitors would arrive via private vehicles, such as passenger cars or vans.

e. Event Visitor Information Centers and Visitor Facilities

During the Exhibition period, the Fremont Road Information Center, Parkdale Viewing Center, Texas Creek Limited Rest Stop, Vallie Bridge Limited Rest Stop, and Salida Information Center would be temporarily developed, staffed, and operated.

In addition to the OTR event visitor information centers and the rest stop, all AHRA recreation sites in the project corridor would remain open to the public, including OTR visitors, for the duration of the

exhibition period, and existing recreational activities would be permitted to continue. The standard park entrance fees would apply to all vehicles entering the AHRA (\$6.00/vehicle).

2. Alternative 1c

Alternative 1c includes the same panel arrangement as the Artists' Proposed Action (Alternative 1a). The following project components would vary from the Proposed Action for this alternative:

- Alternative 1c would impose new, temporary, or event-only commercial boat rations during the exhibition period, which would allow higher than normal levels of boating use. The new temporary rationing system would allow boating levels to occur up to the defined carrying capacity for each segment of the river without being accounted for in subsequent years' rationing.
- Under Alternative 1c, visitation to all AHRA sites located along US 50 would be open to OTR-related visitation uses only. Temporary, event-only use fees would apply.
- Alternative 1c would use a 3-week (21-day) viewing period.
- Visitation during the exhibition period would increase to 439,000.

3. Alternative 1d

Alternative 1d includes the same panel arrangement as the Artists' Proposed Action (Alternative 1a). The following project components would vary from the Proposed Action for this alternative:

- Under Alternative 1d, visitation to all AHRA sites located along US 50 would be closed to the public and/or OTR-related visitation uses. State Parks would require a lump sum payment from the applicant to offset revenue lost by closing fee areas in addition to the Special Activity Agreement fee.
- Under Alternative 1d, the 2-week viewing period would occur during early to mid-September (ending no later than September 21).
- Alternative 1d would utilize an accelerated construction schedule. Project installation would be compressed into approximately one year.
- Visitation during the exhibition period would decrease to 224,000.

4. Alternative 2

Alternative 2 varies from the Artists' Proposed Action (Alternative 1a) in that it would include only the Artists' proposed panels located east of Texas Creek, a total of approximately 4.8 miles of panels at five sites in the project corridor. This would be a reduction of 1.1 miles and three sites relative to the Proposed Action. The panel configuration in this alternative was reduced to address Cooperating Agency concerns regarding panel placement west of Texas Creek. Specifically, the Cooperating Agencies expressed concerns regarding potential impacts to residents in more populated areas of the upper canyon during all project phases, and potential safety concerns in the Tunnel section. This option would alleviate construction disturbances and most exhibition phase traffic from populated areas in the upper canyon; however, the removal of all panels west of Texas Creek would not alleviate commuter impacts for eastbound commuters. Additionally, under Alternative 2, the 2-week viewing period would occur sometime in the period June 21-July 14. Visitation during the exhibition period would increase to 361,000. All other design elements of Alternative 2, including installation and removal techniques and

exhibition period details (viewing areas, traffic management, and transportation), would be the same as described for Alternative 1a.

5. Alternative 3

The Alternative 3 panel configuration would eliminate 1.8 miles of panels from the Artists' Proposed Action. This alternative would include a total of 4.1 miles of panels at eight sites in the project corridor. The Alternative 3 panel configuration would eliminate selected panels throughout the corridor to reduce potential impacts to bighorn sheep populations and raptor nesting and roosting sites. Other species, including migratory birds and bats, were also considered in the development of this alternative. Visitation during the exhibition period would decrease to 320,000.

All other elements of Alternative 3, including installation and removal time frame and techniques, and exhibition period details (viewing areas, traffic management, and transportation), would be the same as described for Alternative 1a, unless otherwise noted.

6. Alternative 4

The Alternative 4 panel configuration varies substantially from Alternative 1a. Alternative 4 would include a total of 1.4 miles of panels at four sites in the project corridor (Map 2-6 and Table 2-11). The Artists' proposed panel configuration was reduced to eliminate panels from the Arkansas Canyonlands ACEC. The ACEC was designated "to protect, enhance, and interpret the significant scenic, historic, and archaeological values; the threatened and endangered peregrine falcon; key raptor habitat area; bighorn sheep habitat; and important fisheries," (BLM 1996).

This reduction in panel length would require less than the 28-month construction period identified for Alternative 1a. Alternative 4 assumes construction duration of approximately 14 months. Additionally, the reduction in panels is expected to result in a decrease in visitation to the project corridor, and would change viewing patterns and key visitation areas relative to those described under the other alternatives. Visitation during the exhibition period would decrease to 141,000. Under Alternative 4, visitor facilities and amenities would be available at the Fremont Road Information Center, Texas Creek Limited Rest Stop, Vallie Bridge Limited Rest Stop, Salida Information Center and at AHRA recreation fee sites. Alternative 4 would not include the Parkdale Viewing Center.

AFFECTED ENVIRONMENT

The Arkansas River is situated in a canyon setting surrounded by hilly, steep terrain. U.S. Highway 50 (US 50) and the Union Pacific Railroad (UPRR) parallel the river through the entire Project Area. Access to and through the Project Area is limited to US 50, which is the primary access to all recreation sites and residential areas within the Arkansas River corridor and serves as a major thoroughfare for east-west travel in central Colorado. Between Cañon City and Salida, Colorado, State Highway (SH) 9 east of Parkdale and Colorado SH 69 at Texas Creek provide access to and from US 50 in the Project Area. Although Cañon City and Salida are the nearest incorporated population centers, several smaller residential communities are located along or are adjacent to the river corridor, including Wellsville, Swissvale, Howard, Coaldale, Cotopaxi, Texas Creek, and Parkdale.

The footprint of the proposed project would encompass approximately 310 acres. The majority of the Project Area is located in Fremont County; however, a small portion at the western end of the project is also located in Chaffee County. Although the great majority of the proposed project would be located

on BLM-administered lands, some project elements would be on lands owned by the Colorado State Land Board (SLB), private lands, and lands cooperatively managed by Colorado State Parks (State Parks) in the Arkansas Headwaters Recreation Area (AHRA) (Map 1-2). The AHRA is a nationally significant multiple-use resource that provides a variety of recreational opportunities and serves as a regional hub for outdoor recreational pursuits.

Approximately 80% of the area encompassed by the proposed project would be located in the Arkansas Canyonlands Area of Critical Environmental Concern (ACEC), a BLM-specific designation that recognizes areas where special management attention is needed to protect and prevent irreparable damage to outstandingly remarkable values. The Arkansas Canyonlands ACEC contains scenic, historic, and cultural values; and key habitat for raptor, bighorn sheep, and fisheries. The panel sites on the eastern end of the project (the area nearest to Cañon City) would occur within parts of the ACEC, including the Spike Buck, Three Rocks, Maytag, and Texas Creek panel sites as well as the majority (but not all) of the Parkdale panel site (Map 1-2).

The Arkansas River corridor has retained its natural characteristics even though it has been modified by a railroad, a busy highway and substantial agricultural, residential, and commercial development along much of its length. The Arkansas River has a significant and vital impact on the valley's economy and beyond because of water rights for irrigation, municipal and industrial purposes, and for the sale and storage of water. Also, because of its natural beauty, biological productivity, steep gradient and diversity of river environments, the Arkansas River is very popular with recreationists.

The proposed Project Area would also encompass portions of the Arkansas River Special Recreation Management Area (SRMA) and is located adjacent to the McIntyre Hills Wilderness Study Area (WSA). A thorough description of these and other resources in the Project Area is provided in Chapter 3.0.

IMPACTS

1. Intensity

The following terms are used to describe the degree, level, or significance of the effect:

- **No effect:** No discernable effect.
- **Negligible:** Effect is at the lowest level of detection and causes very little or no disturbance or improvement.
- **Minor:** Effect that is slight but detectable, with some perceptible effects of disturbance or improvement.
- **Moderate:** Effect is readily apparent and has measurable effects of disturbance or improvement.
- **Significant:** Effect is readily apparent and has measurable effects of disturbance or improvement that are of local, regional or global importance; or sets a precedent for future project undertakings by federal agencies.

2. Summary of Impacts

Alternatives 1a, 1c, and 1d would generally result in more impacts than the other alternatives as more area would be disturbed for the project, and more visitation and associated traffic would be projected. Alternative 4 would generally result in the least amount of impacts as the associated project disturbance would be greatly reduced from the other alternatives considered, and visitation and associated traffic would be reduced compared to the other alternatives.

A summary of impact conclusions is presented in Table S-4, which presents the overall impact ratings based on the application of design features proposed by OTR Corp that are presented in Chapter 2.0. Based on the impact analyses, additional mitigation measures were identified to minimize or offset potential adverse impacts. See Chapter 5. Mitigation measures may be included as conditions of the BLM Land Use Authorization or other state or local permits.

A more detailed summary of impacts is presented in Chapter 2.0 (Table 2-14). The analysis behind the conclusions is discussed in Chapter 4.0.

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Table S-4 Impact Summary Table (Impacts are primarily short-term unless otherwise noted.)

Resource Area		No Action	Alternative 1			Alt. 2	Alt. 3	Alt. 4
			1a	1c	1d			
Terrestrial Species	Bighorn sheep (overall)	No effect	Moderate-significant (short-long term)	Moderate-significant (short-long term)	Moderate-significant (short-long term)	Moderate-significant (short-long term)	Moderate (short-long term)	Minor
	Mule deer (overall)	No effect	Moderate	Moderate	Moderate	Moderate	Minor	Minor
	Elk (overall)	No effect	Minor	Minor	Minor	Minor	Minor	Minor
	Black bear	No effect	Minor	Minor	Minor	Negligible	Minor	Minor
	Mountain lion	No effect	Minor	Minor	Minor	Minor	Minor	Minor
	Bats	No effect	Moderate	Moderate	Moderate	Minor	Minor	Minor
	Fossorial mammals	No effect	Minor	Minor	Minor	Minor	Minor	Minor
	Reptiles	No effect	Minor	Minor	Minor	Minor	Minor	Minor
	Amphibians	No effect	Minor	Minor	Minor	Minor	Minor	Minor
Avian Species		No effect	Moderate-significant	Moderate-significant	Moderate-significant	Moderate	Moderate-minor	Minor
Aquatic Species		No effect	Moderate	Moderate-significant (short-long term)	Moderate	Moderate	Moderate	Moderate
Wetlands, Floodplains and Riparian Habitat		No effect	Moderate	Moderate	Moderate	Moderate-minor	Moderate-minor	Minor
Vegetation and Plant Communities		No effect	Moderate	Moderate	Moderate	Moderate-minor	Moderate-minor	Minor
Noxious Weeds and Invasive Species		No effect	Minor	Minor	Minor	Minor	Minor	Minor
Range Resources		No effect	Moderate-minor	Moderate-minor	Moderate-minor	Moderate-minor	Moderate-minor	Minor
Threatened, Endangered, and Sensitive Species	Big free-tailed bat	No effect	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate
	Botta's pocket gopher	No effect	Moderate	Moderate	Moderate	Minor	Moderate	Moderate
	Fringed myotis	No effect	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate
	Gunnison's prairie dog	No effect	Minor	Minor	Minor	Minor	Minor	Minor
	Northern river otter	No effect	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate
	Townsend's big-eared bat	No effect	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate
	Yuma myotis	No effect	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate
	Bald eagle	No effect	Moderate	Moderate	Moderate	Minor	Moderate	Moderate
	Barrow's goldeneye	No effect	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
	Lewis' woodpecker	No effect	Moderate	Moderate	Moderate	Minor to moderate	Moderate	Moderate
	Mexican spotted owl	No effect	Minor	Minor	Minor	Minor	Minor	Minor
	Northern Goshawk	No effect	Minor to Moderate	Minor to Moderate	Minor to Moderate	Minor to Moderate	Minor to Moderate	Minor to Moderate
	Peregrine falcon	No effect	Minor to Moderate	Minor to Moderate	Minor to Moderate	Minor to Moderate	Minor to Moderate	Minor to Moderate
	Flathead chub	No effect	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor
	Greenback cutthroat trout	No effect	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor
	Southern redbelly dace	No effect	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor	Negligible to minor
	Northern leopard frog	No effect	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate
	Colorado checkered whiptail	No effect	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
	Fendler's false cloak fern	No effect	Negligible to moderate	Negligible to moderate	Negligible to moderate	Negligible to moderate	Negligible to moderate	Negligible to moderate

Resource Area		No Action	Alternative 1			Alt. 2	Alt. 3	Alt. 4
			1a	1c	1d			
	Arkansas Canyon stickleaf	No effect	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate	Minor to moderate
Atmosphere, Air Resources, and Air Quality		No effect	Minor	Minor	Minor	Minor	Minor	Minor
Water Resources*		No effect	Minor	Minor	Minor	Minor	Minor	Minor
Soil Resources*		No effect	Minor	Minor	Minor	Minor	Minor	Minor
Geologic Substrate and Terrain		No effect	Minor	Minor	Minor	Minor	Minor	Minor
Environmental Justice/Protection of Children		No effect	No effect	No effect	No effect	No effect	No effect	No effect
Socioeconomics, Social Impacts		No effect	Minor-moderate	Minor-moderate	Minor-moderate	Minor-moderate	Minor-moderate	Minor-moderate
Public Health and Safety		No effect	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Transportation and Traffic		No effect	Significant	Moderate	Moderate	Moderate	Moderate	Moderate
Hazardous Materials		No effect	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Waste (Nonhazardous)		No effect	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Realty Authorizations and Land Use		No effect	Minor	Minor	Minor	Minor	Minor	Minor
Recreation Resources		No effect	Significant	Significant	Significant	Significant	Significant	Moderate
Visual/Aesthetic Resources		No effect	Significant	Significant	Significant	Significant	Significant	Moderate
Wild and Scenic Rivers		No effect	No effect	No effect	No effect	No effect	No effect	No effect
Special Management Areas (ACEC)		No effect	Significant	Significant	Significant	Significant	Significant	No effect
Sounds Resources and Noise		No effect	Minor	Minor	Minor	Minor	Minor	Minor
Cultural, Historic, and Native American Cultural Concerns (rating is a range that will be revised following further consultation)		No effect	Minor-Significant	Minor-Significant	Minor-Significant	Minor-Significant	Minor-Significant	Minor-Significant
Paleontological Resources		No effect	Moderate-minor	Moderate-minor	Moderate-minor	Moderate-minor	Moderate-minor	Moderate-minor

*Rating reflects implementation of identified mitigation.